



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,905	02/28/2002	Peter J. Zangari	3499-112	8211
27383	7590	12/20/2007	EXAMINER	
CLIFFORD CHANCE US LLP			NEWTON, JARED W	
31 WEST 52ND STREET			ART UNIT	PAPER NUMBER
NEW YORK, NY 10019-6131			3693	
MAIL DATE		DELIVERY MODE		
12/20/2007		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/084,905	ZANGARI ET AL.
Examiner	Art Unit	
Jared W. Newton	3692	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 24 September 2007.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-36 is/are pending in the application.  
4a) Of the above claim(s) 1,2 and 23-36 is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 3-22 is/are rejected.  
7)  Claim(s) \_\_\_\_\_ is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892) 4)  Interview Summary (PTO-413)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948) Paper No(s)/Mail Date. \_\_\_\_ .  
3)  Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date  
5)  Notice of Informal Patent Application  
6)  Other: \_\_\_\_ .

## DETAILED ACTION

This non-final rejection is in reply to the remarks filed September 24, 2007.

Claims 3-22 are pending.

### ***Claim Objections***

Claim 14 is objected to because of the following informalities: The word "mode" (line 10) should be replaced with the word --model--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 3-5, 7, 8, 11-15 and 17-22 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent Application Publication No. 2001/0011243 to Dembo et al. (hereafter Dembo).

**In regard to claim 3**, Dembo discloses a system and method for determining attributes ("risk metrics") for a plurality of data groups ("portfolios of instruments") related to a set of data, wherein said system and method improve upon known prior

systems and methods for determining risk metrics for portfolios, wherein said prior art method includes the steps of:

providing a set of factors (see [0046]-[0047]);

providing a set of models that model attributes of the data groupings (see e.g. [0049]), each model being dependent on at least one factor selected from the set of factors (see [0046]);

associating each data grouping with at least one model (see [0049]);

determining factor values for at least one of the factors in the set of factors on which the models associated with the data groups depend (see [0047]);

for each data group, evaluating an associated model using at least the determined factor values and the set of data to provide a value for the attribute modeled by the associated model (see e.g. [0049]); and

storing the attribute value (see e.g. [0050]).

**In regard to claim 4**, Dembo further discloses the set of data comprising financial data related to a plurality of financial instruments; and the data groups comprising portfolios, each portfolio identifying at least one financial instrument from the plurality of financial instruments (see [0046]-[0056]).

**In regard to claim 5**, Dembo discloses a method for analyzing a plurality of portfolios using financial data, said method comprising the steps of:

providing a set of factors (see [0046]-[0047]);

providing a set of models that model attributes of portfolios (see e.g. [0049]), each model being dependent on at least one factor selected from the set of factors (see [0046]);

associating each portfolio with at least one model (see [0049]);

determining factor values for at least a subset of the factors in the set of factors on which the models associated with the portfolios depend (see [0047]);

for each portfolio, evaluating an associated model using at least the determined factor values and the set of data to provide a value for the attribute modeled by the associated model (see e.g. [0049]); and

storing the attribute value (see e.g. [0050]).

**In regard to claim 7**, Dembo further discloses the set of models including at least one performance model, wherein performance is measured as the monetary value of the portfolio (see [0046] and [0051] – In regard to the model output “V,” Dembo recites, “V can be the monetary value of the instrument or can be another derived risk value, such as a delta, gamma or sensitivity value...”); a particular portfolio being associated with the performance model such that a performance value for the particular portfolio is determined during the evaluating step, the method further comprising the steps of:

receiving an alternative performance value for the particular portfolio (see [0047]-[0048]); and

comparing the determined performance value with the alternative performance value (see id.).

**In regard to claim 8**, Dembo further discloses the indication of a potential discrepancy between the disclosed determined and alternative values triggering the application of a calibration constant to a particular model so that the model more accurately reflects the alternative value (see id.). It is inherent that the application of the calibration constant would occur after the discrepancy reaches a predefined value, for instance, a non-zero value.

**In regard to claim 11**, Dembo further discloses the steps of:  
making the factor set available to a model development platform;  
developing in the platform a new model dependent on at least one factor selected from the set of factors; and  
adding the new model to the set of models (see [0059]-[0060]; see also claims 1 and 15).

**In regard to claim 12**, Dembo further discloses each model as stored in a database (see id.). It is inherent within the art of database storage that items in a database are stored as database objects. It is also inherent within the disclosure of the ability of a user to create and modify models (see id.) that said models would be compatible with the platform in which they are to be created or modified.

**In regard to claim 13**, Dembo further discloses the step of generating at least one report based upon the portfolio attributes (see [0055]).

**In regard to claim 14**, the system disclosed by Dembo comprises:  
a factor library comprising a plurality of factors (see e.g. [0046]-[0047]);

a model database comprising a set of model objects defining models for portfolio attributes, each model being dependent on at least one factor in the factor library (see [0055]-[0058]);

a plurality of portfolio objects, each portfolio object configured to store at least one attribute to be determined for the respective portfolio, each portfolio object being associated with at least one model (see [0056]);

a factors determination module configured to determine factor values for at least a subset of factors in the factors library and store the factor values in a factor value database (see [0048] and [0058]); and

a model evaluation module configured to evaluate models associated with a particular portfolio using at least the determined factor values and the financial data to provide a value for the attribute modeled by the associated model and store the attribute values in the respective portfolio object for the particular portfolio (see [0049]).

**In regard to claim 15**, Dembo further discloses the model database including performance model objects and configured to store a historic time series of the modeled attributes at various times, for instance at times  $T_0$ ,  $T_1$  and  $T_2$  (see FIGS. 7 and 8). Dembo further discloses the model evaluation module configured to add determined factor values (i.e.  $rf_1$ ,  $rf_i$  – see [0046]-[0048]) to the performance objects.

**In regard to claim 17**, Dembo further discloses the system receiving as input an alternative performance valuation for the particular portfolio (see [0047]-[0048]); and the system as configured to store a difference determined by comparison of the alternative valuation and a determined performance value (see id.)

**In regard to claim 18**, the limitations are deemed anticipated by Dembo as applied to claim 8 above.

**In regard to claim 19**, Dembo discloses the alternative performance value comprising an officially reported, or “market” value (see [0048]).

**In regard to claim 20**, Dembo further discloses an exemplary organization structure of the database for storing database objects including models, factors, and portfolios comprising instruments, wherein each database object is assigned a unique ID and stored in an association table (see FIG. 7). Although not explicitly shown, it is inherent that the models stored in the database (see e.g. [0061]), as well as the portfolio objects (see e.g. [0059]) would be assigned unique IDs similar to those shown in Figure 7, and stored in similar association tables.

**In regard to claim 21**, Dembo discloses the ability of a user of said system to create and modify models via an interface, and to store said models in a database (see [0059]-[0060]; see also claims 1 and 15). It is inherent within these teachings that the interface is configured to allow data from the database to be exported so that the user is capable of manipulating the data to create and modify models, and further configured to allow a user to import said models to store them in said database.

**In regard to claim 22**, Dembo further discloses the generation of a report (see [0055]).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dembo as applied to claims 3-5, 7, 8, 11-14 and 20-22 above, alone.

**In regard to claims 6 and 16**, Dembo discloses the system and method as set forth above, and further discloses the models including at least one risk model and at least one performance model, wherein performance is measured by monetary value (see [0046] and [0051]). Dembo does not explicitly disclose each portfolio being associated with at least one risk model and at least one performance model. It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the models disclosed by Dembo to analyze each portfolio with at least one model that outputs a risk metric and at least one model that outputs a performance metric. The motivation for doing so would be to provide a user with a more detailed analysis of the particular portfolio.

**In regard to claim 10**, Dembo discloses the system and method as set forth above, but does not explicitly disclose each portfolio as associated with at least one model in accordance with an investment strategy reflected by the particular portfolio. In view of the teachings of Dembo, it would have been obvious to apply a particular model to a particular portfolio according to an investment strategy reflected by the portfolio. For

instance, Dembo discloses the models including a model for measuring delta, which would be obvious to apply to a portfolio that seeks to reach a particular delta value.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dembo as applied to claims 3-5, 7, 8, 11-14 and 20-22 above, and further in view of US Patent No. 6,021,397 to Jones et al. (hereafter Jones).

**In regard to claim 9**, Dembo discloses the system and method set forth above including the set of models including at least one performance model. Dembo does not explicitly disclose said performance model as modeling portfolio return. Jones discloses a system for modeling return scenarios of portfolios (see Jones, col. 3, lines 47-51). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the return model disclosed by Jones in the set of models disclosed by Dembo. The motivation would be to provide a user with a more detailed analysis of a particular portfolio.

In further regard to claim 9, Dembo discloses the alternative performance value comprising an officially reported, or “market” value (see [0048]).

In the above rejections, the Examiner has relied on the Dembo reference, which teaches a prior art system and method for determining risk and performance metrics for portfolios, as well as the system and method of the Dembo invention itself. Although the prior art system and method and the system and method of Dembo constitute separate

inventions, the Dembo invention includes the limitations of the prior art invention, as it is an improvement thereon.

With respect to the above rejections, the Examiner has cited particular portions of the reference(s), and although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that the Applicant consider each cited reference in its entirety as potentially teaching the limitations of the claimed invention.

### ***Response to Arguments***

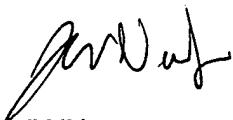
Applicant's arguments filed September 24, 2007 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

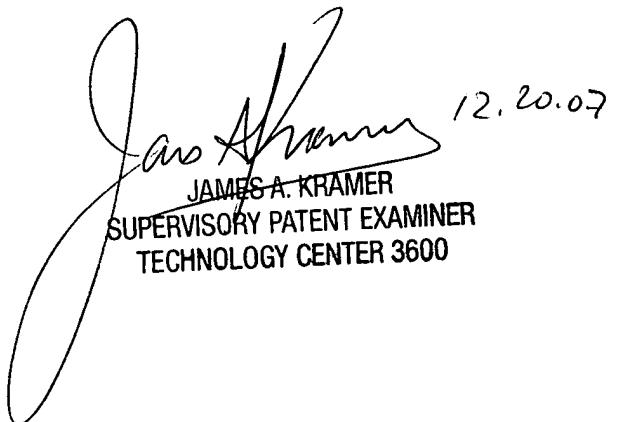
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jared W. Newton whose telephone number is (571) 272-2952. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Kramer can be reached on (571) 272-6783. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



JWN  
December 17, 2007



12.20.07  
JAMES A. KRAMER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600